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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,738	09/15/2005	Steffen Goletz	08358.0006	1565

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EXAMINER	
AEDER, SEAN E	

ART UNIT	PAPER NUMBER
1642	

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/524,738	GOLETZ ET AL.	
	Examiner	Art Unit	
	Sean E. Aeder, Ph.D.	1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-24,32,33 and 36-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-24,32,33,36-38,41-47 and 49* is/are rejected.

7)☒ Claim(s) *39,40 and 43-48* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/16/05, 2/16/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

The response filed on 11/6/06 to the Restriction Requirement of 10/5/06 has been received. Applicant has elected Group II for examination. Because Applicant did not distinctly and specifically point out any errors in the restriction requirement, the election has been treated as an election without traverse (MPEP 818.03(a)).

Claims 1-26 and 28-35 were pending.

Claims 1-15, 25, 26, 28-31, and 34-35 were cancelled by Applicant.

Claims 36-49 were added by Applicant.

Claims 16-24, 32, 33, 36-49 are currently under consideration.

Claim Objections

Claim 43 is objected to for being dependent on cancelled claim 1. It is suspected Applicant intended claim 43 to recite: "The lysate of claim ~~1~~ **16**...". Proper correction is required.

Claims 44-47 are objected to for describing tumor cells having various types of relationships (autologous, allogenic, syngenic, xenogenic); however, claims 44-47 do not indicate to *what* said tumor cells share said relationships. Without indicating to what said tumor cells share said relationships, claims 44-47 do not further limit the claim from which they depend (claim 16). Proper correction is required.

Claims 39, 40 and 48 are objected to for being dependent upon a rejected claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-24, 32, 33, 44-47, and 49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 and dependent claims 18-24, 32, and 33 are rejected because claim 17 recites "Dendritic cells loaded with the lysate of claim 16". It is unclear what is meant by "loaded". It is unclear whether dendritic cells "loaded" with lysate have had lysate injected intracellularly or if dendritic cells "loaded" with lysate are dendritic cells merely mixed with lysate wherein said lysate is located on the outer surface of the dendritic cells. The specification discloses passages using "loaded" in different ways: "...administering the cell lysates of the invention or dendritic cells loaded with the cell lysate loaded to an individual are provided" (see page 1); "In special cases also mDC can be loaded (pulsed) with antigens or immunogens from the lysate..." (see page 27); "...dosages comprising a lysate according to the invention loaded onto dendritic cells" (see page 27). Thus, it is not clear from the claims or the specification what is meant by " Dendritic cells loaded with the lysate of claim 16". This renders the claim indefinite because the term "loaded" is not defined by the claim and one of ordinary skill in the art

would not be reasonably apprised of the scope of the invention. Given the above reasons, the metes and bounds of the claims cannot be determined.

Claims 44-47 are rejected for describing tumor cells having various types of relationships (autologous, allogenic, syngenic, xenogenic); however, claims 44-47 do not indicate to *what* said tumor cells share said relationships. It is unclear how something can have a relationship to nothing. Given the above reasons, the scope of the claims cannot be determined.

Claim 49 is rejected for reciting: "...wherein more than one type of tumor cell is used...". Claim 49 and the claim on which claim 49 depends are product claims lacking statements of intended use. Thus, it is unclear what "is used" means in the context of claim 49. Given the above reasons, the scope of the claims cannot be determined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 16, 18-21, 24, 36, 41-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang et al (Cancer Research, 7/1/00, 60:3435-3439).

Claim 16 is drawn to a lysate obtainable by a process comprising the steps of: (a) inducing necrosis of tumor cells by subjecting the cells to a temperature of more than 41.2C for at least 30 minutes; and (b) lysing said necrotic tumor cells. Claim 18 is drawn to a composition comprising the lysate of claim 16. Claim 19 is drawn to the composition of claim 19, which is a pharmaceutical composition. Claim 20 is drawn to the composition of claim 18, which is a vaccine composition. Claim 21 is drawn to the pharmaceutical composition of claim 19, which is optionally combined with an adjuvant. Claim 24 is drawn to a vaccine composition comprising a cell lysate of claim 16. Claim 36 is drawn to the lysate of claim 16, wherein necrosis is induced in tumor cells selected form the group consisting of tumor cell lines, cells derived from primary tumor material, cells derived from cell populations of primary tumor material and/or metastasis including micrometastasis. Claim 41 is drawn to the lysate of claim 16, wherein more than 40% of the tumor cells are necrotic after induction of necrosis. Claim 42 is drawn to the lysate of claim 16, wherein more than 70% of the tumor cells are necrotic after induction of necrosis. Claim 43 is drawn to the lysate of claim 1, wherein the tumor cells are genetically engineered, mutated or infected by oncogenic viruses. Claim 44 is drawn to the lysate of claim 16, wherein the tumor cells are autologous and from the same or from different tissues, organs or cell origin in a species. Claim 45 is drawn to the lysate of claim 16, wherein the tumor cells are allogenic. Claim 46 is drawn to the lysate of

claim 16, wherein the tumor cells are syngenic. Claim 47 is drawn to the lysate of claim 16, wherein eh tumor cells are xenogenic.

Huang et al teaches a lysate of cells from a mutated 4T1 tumor cell line and compositions of said lysate obtainable by a process comprising the steps of: (a) inducing necrosis of tumor cells by subjecting the cells to a temperature of more than 41.2C for at least 30 minutes; and (b) lysing said necrotic tumor cells (Figure 1B, in particular). It is noted that the claims describing lysate as a "pharmaceutical composition" (claim 19) or a "vaccine composition" (claims 20 and 24) are merely describing an intended use of the claimed lysate compositions. It is noted that statements of intended purposes or uses are not considered limitations because they merely state an intended use of the invention rather than any distinct definition of any of the claimed invention's limitations (see Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999)). Recitation of statements describing the claimed product as a medicament intended to treat a condition are not given patentable weight and are not limitations to the claims. The relationships recited in claims 44-47 would be attributed to 4T1 tumor cells under different circumstances, and do not further limit claim 16. Although Huang et al does not specifically teach that more than 40% or more than 70% of the tumor cells are necrotic after induction of necrosis, the claimed product appear to be the same as the prior art, absent a showing of unobvious differences. The office does not have the facilities and resources to provide the factual evidence needed in order to establish that the products produced by the method of the prior art do not possess the same material and structural

characteristics of the claimed products. In the absence of evidence to the contrary, the burden is on Applicant to prove that the claimed products are different from that taught by the prior art and to establish patentable differences. See In re Best 562F .2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray 10 USPQ 2nd 1992 (PTO Bd. Pat. App. & Int. 1989).

Claims 16, 18-21, 24, 36-38, and 41-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Gough et al (Cancer Research, 2001, 61:7240-7247).

Claims 16, 18-21, 24, 36, 41-47. Claim 37 is drawn to the lysate of claim 16, wherein induction of necrosis is achieved by incubating said tumor cells at a temperature of more than 42C. Claim 38 is drawn to the lysate of claim 16, wherein induction of necrosis is achieved by incubating said tumor cells at a temperature in the range of 45.5-47C.

Gough et al teaches a lysate of cells from a mutated CMT93tk tumor cell line and composition of said lysate obtainable by a process comprising the steps of: (a) inducing necrosis of tumor cells by subjecting the cells to a temperature of more than 45C for one hour; and (b) lysing said necrotic tumor cells (left column on page 7241, in particular). It is noted that the claims describing lysate as a "pharmaceutical composition" (claim 19) or a "vaccine composition" (claims 20 and 24) are merely describing an intended use of the claimed lysate compositions. It is noted that statements of intended purposes or uses are not considered limitations because they merely state an intended use of the invention rather than any distinct definition of any of

the claimed invention's limitations (see Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999)). Recitation of statements describing the claimed product as a medicament intended to treat a condition are not given patentable weight and are not limitations to the claims. The relationships recited in claims 44-47 would be attributed to CMT93tk tumor cells under different circumstances, and do not further limit claim 16. Although Gough et al does not specifically teach that more than 40% or more than 70% of the tumor cells are necrotic after induction of necrosis, the claimed product appear to be the same as the prior art, absent a showing of unobvious differences. The office does not have the facilities and resources to provide the factual evidence needed in order to establish that the products produced by the method of the prior art do not possess the same material and structural characteristics of the claimed products. In the absence of evidence to the contrary, the burden is on Applicant to prove that the claimed products are different from that taught by the prior art and to establish patentable differences. See In re Best 562F .2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray 10 USPQ 2nd 1992 (PTO Bd. Pat. App. & Int. 1989).

Claims 16-24, 32, 33, 36, 37, 41-47 rejected under 35 U.S.C. 102(e) as being anticipated by Subjeck et al (US Patent 6,984,384 B1; filed 9/29/00).

Claims 16, 18-21, 24, 36, 37, and 41-47 are described above. Claim 17 is drawn to dendritic cells loaded with the lysate of claim 16. Claim 18 is further drawn to a composition comprising the dendritic cells of claim 17. Claim 22 is drawn to the

dendritic cells of claim 17, wherein said dendritic cells are immature. Claim 23 is drawn to the dendritic cells of claim 17, wherein said dendritic cells are mature. Claim 24 is further drawn to a vaccine composition comprising the dendritic cells of claim 17 and an adjuvant. Claim 32 is drawn to the composition of claim 18, wherein the dendritic cells are immature. Claim 33 is drawn to the composition of claim 20, wherein the dendritic cells are mature.

Subjeck et al teaches a lysate of mutated tumor cells derived from a patient and a composition of said lysate obtainable by a process comprising the steps of: (a) inducing necrosis of tumor cells by subjecting the cells to a temperature of 43C for two hours; and (b) lysing said necrotic tumor cells (see column 19, in particular). It is noted that the claims describing lysate as a "pharmaceutical composition" (claim 19) or a "vaccine composition" (claims 20 and 24) are merely describing an intended use of the claimed lysate compositions. It is noted that statements of intended purposes or uses are not considered limitations because they merely state an intended use of the invention rather than any distinct definition of any of the claimed invention's limitations (see Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165 (Fed. Cir. 1999)). Recitation of statements describing the claimed product as a medicament intended to treat a condition are not given patentable weight and are not limitations to the claims. The relationships recited in claims 44-47 would be attributed to the tumor cells taught by Subjeck under different circumstances, and do not further limit claim 16. Although Subjeck et al does not specifically teach that more than 40% or more than 70% of the tumor cells are necrotic after induction of necrosis, the

claimed product appear to be the same as the prior art, absent a showing of unobvious differences. The office does not have the facilities and resources to provide the factual evidence needed in order to establish that the products produced by the method of the prior art do not possess the same material and structural characteristics of the claimed products. In the absence of evidence to the contrary, the burden is on Applicant to prove that the claimed products are different from that taught by the prior art and to establish patentable differences. See In re Best 562F .2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray 10 USPQ 2nd 1992 (PTO Bd. Pat. App. & Int. 1989). Subjeck et al further teaches compositions comprising immature and mature dendritic cells loaded with the lysate of mutated tumor cells derived from a patient obtainable by a process comprising the steps of: (a) inducing necrosis of tumor cells by subjecting the cells to a temperature of 43C for two hours; and (b) lysing said necrotic tumor cells (columns 26-27, in particular). Subjeck et al further teaches comprising immature and mature dendritic cells loaded with the lysate of mutated tumor cells combined with an adjuvant (column 23, in particular).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 49 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one

skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The invention appears to employ novel biological materials, specifically NM-F9 cells and NM-D4 cells. Since the biological materials are essential to the claimed invention they must be obtainable by a repeatable method set forth in the specification or otherwise readily available to the public. If the biological materials are not so obtainable or available, the requirements of 35 U.S.C. 112 may be satisfied by a deposit of the biological materials. The specification does not disclose a repeatable process to obtain the biological materials and it is not apparent if the biological materials are readily available to the public. It is noted that Applicant has deposited the biological materials (p. 23 of the specification), but there is no indication in the specification as to public availability. If the deposit is made under the Budapest Treaty, then an affidavit or declaration by Applicant, or a statement by an attorney of record over his or her signature and registration number, stating that the specific biological materials have been deposited under the Budapest Treaty and that the biological materials will be irrevocably and without restriction or condition released to the public upon the issuance of a patent, would satisfy the deposit requirement made herein. If the deposit has not been made under the Budapest Treaty, then in order to certify that the deposit meets the criteria set forth in 37 C.F.R. 1.801-1.809, Applicant may provide assurance of compliance by an affidavit or declaration, or by a statement by an attorney of record over his or her signature and registration number, showing that:

(a) during the pendency of this application, access to the invention will be afforded to the Commissioner upon request;

(b) all restrictions upon availability to the public will be irrevocably removed upon granting of the patent;

(c) the deposit will be maintained in a public depository for a period of 30 years or 5 years after the last request or for the effective life of the patent, whichever is longer;

(d) a test of the viability of the biological material at the time of the deposit will be made (see 37 C.F.R. 1.807); and

(e) the deposit will be replaced if it should ever become inviable.

Applicant's attention is directed to M.P.E.P. 2400 in general, and specifically to 2411.05, as well as 37 C.F.R. 1.809(d), wherein it is set forth that the "specification shall contain the accession number for the deposit, the date of the deposit, the name and address of the depository, and a description of the deposited material sufficient to specifically identify it and to permit examination." The specification should be amended to include this information, however, Applicant is cautioned to avoid the entry of new matter into the specification by adding any other information. Finally, Applicant is advised that the address for the ATCC has recently changed, and that the new address should appear in the specification. The new address is:

American Type Culture Collection

10801 University Boulevard

Manassas, VA 20110-2209

Summary

No claim is allowed. Claims 39, 40, and 48 are objected to and claim 49 is rejected under 35 U.S.C., but appear free of the prior art teaching: (1) a lysate obtainable by a process comprising the steps of (a) inducing necrosis of tumor cells by subjecting the cells to a temperature of 45.5-47C for at least 15 minutes, and (b) lysing said necrotic tumor cells so as to obtain a lysate; (2) a lysate obtainable by a process comprising the steps of (a) inducing necrosis of tumor cells by subjecting the cells to a temperature of more than 41.2C for 2-3 hours, and (b) lysing said necrotic tumor cells so as to obtain a lysate; (3) a lysate obtainable by a process comprising the steps of (a) inducing necrosis of more than one type of tumor cells by subjecting the cells to a temperature of more than 41.2C for 15 minutes, and (b) lysing said necrotic tumor cells so as to obtain a lysate; or (4) a lysate obtainable by a process comprising the steps of (a) inducing necrosis of NM-F9 or NM-D4 tumor cells by subjecting the cells to a temperature of more than 41.2C for 15 minutes, and (b) lysing said necrotic tumor cells so as to obtain a lysate. The closest prior art for claims 39, 40, 48, and 49 is Subject et al (US Patent 6,984,384 B1; filed 9/29/00); however, this reference does not teach or suggest (1) a lysate obtainable by a process comprising the steps of (a) inducing necrosis of tumor cells by subjecting the cells to a temperature of 45.5-47C for at least 15 minutes, and (b) lysing said necrotic tumor cells so as to obtain a lysate; (2) a lysate obtainable by a process comprising the steps of (a) inducing necrosis of tumor cells by subjecting the cells to a temperature of more than 41.2C for 2-3 hours, and (b) lysing said necrotic tumor cells so as to obtain a lysate; (3) a lysate obtainable by a process

comprising the steps of (a) inducing necrosis of more than one type of tumor cells by subjecting the cells to a temperature of more than 41.2C for 15 minutes, and (b) lysing said necrotic tumor cells so as to obtain a lysate; and (4) a lysate obtainable by a process comprising the steps of (a) inducing necrosis of NM-F9 or NM-D4 tumor cells by subjecting the cells to a temperature of more than 41.2C for 15 minutes, or (b) lysing said necrotic tumor cells so as to obtain a lysate.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E. Aeder, Ph.D. whose telephone number is 571-272-8787. The examiner can normally be reached on M-F: 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shanon Foley can be reached on 571-272-0898. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SHANON A. FOLEY
SUPERVISORY PATENT EXAMINER